COMMUNICABLE DISEASE CENTER

Morbidity and Mortality

Vol. 14, No. 22

WEEKLY REPORT

Week Ending June 5, 1965

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE PUBLIC HEALTH SERVICE

WATER-BORNE SALMONELLA TYPHIMURIUM
Riverside, California

The extensive outbreak of gastroenteritis in Riverside, California (See MMWR, Vol. 14, No. 21) has now been shown to have been caused by *Salmonella typhimurium*, apparently transmitted through the municipal water supply. Several thousand cases have been recorded; *S. typhimurium* has been isolated from over 100 of the cases.

The clinical syndrome has varied widely. In children, diarrhea and fever occurred in almost all cases. Fever of 102°–103° was common, and in a few cases was as high as 106°. Diarrhea was frequently bloody and in one case blood loss was sufficient to have necessitated transfusion. Nausea, vomiting and abdominal cramps were also common complaints. Adults generally suffered a milder illness with severe abdominal cramps and fever of 101°–102° being the most common symptoms; diarrhea was also common, but nausea and vomiting were infrequent. In both children and adults, the duration of illness varied with the severity, lasting 10 days or longer in the most severe.

CONTENTS

Table 1. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
(Cumulative totals include revised and delayed reports through previous weeks)

DISEASE	22nd WEEK ENDED		MEDIAN 1960–1964	CUMULATIVE, FIRST 22 WEEKS		
	JUNE 5, 1965	MAY 30, 1964		1965	1964	MEDIAN 1960–1964
Aseptic meningitis	27	42	26	595	630	558
Brucellosis	1	1	9	94	165	165
Diphtheria	1	9	5	76	113	199
Encephalitis, primary infectious	22	39	---	669	758	---
Encephalitis, post-infectious	18	34	---	352	412	---
Hepatitis, infectious including serum hepatitis	463	655	655	16,000	19,005	21,001
Measles	7,304	24,628	15,553	206,331	393,453	316,180
Meningococcal infections	51	37	36	1,768	1,400	1,099
Poliomyelitis, Total	2	1	16	13	32	152
Paralytic	2	1	12	10	26	115
Nonparalytic	–	–	---	3	5	---
Unspecified	–	–	---	–	1	---
Streptococcal Sore Throat and Scarlet fever	5,718	6,795	5,607	222,292	226,621	191,357
Tetanus	2	6	---	89	91	---
Tularemia	3	13	---	86	110	---
Typhoid fever	13	10	10	153	147	193
Rabies in Animals	93	83	67	2,185	2,032	1,778

Table 2. NOTIFIABLE DISEASES OF LOW FREQUENCY

	Cum.		Cum.
Anthrax:	5	Rabies in Man:	–
Botulism: Wash. –5	8	Smallpox:	1
Leptospirosis: Mich. –1, Ark. –1	15	Trichinosis:	52
Malaria: Mass. –1, N.Y. City –1, La. –1	26	Typhus –	
Plague:	–	Murine: Texas –1	8
Psittacosis: N.Y. City –1, Calif. –2	16	Rky. Mt. Spotted: Pa. –1	23

WATER-BORNE SALMONELLA TYPHIMURIUM

(Continued from front page)

House-to-house sample surveys were conducted throughout the city proper and in adjacent communities. These revealed that the epidemic occurred primarily in the city proper with the highest attack rates evident in the northern areas. There was no apparent concentration of cases by socioeconomic area.

An epidemic curve based on the sample surveys is presented in the accompanying figure. The epidemic began in mid May, reaching a peak on May 26. New cases, presumably resulting from secondary spread, continue to occur.

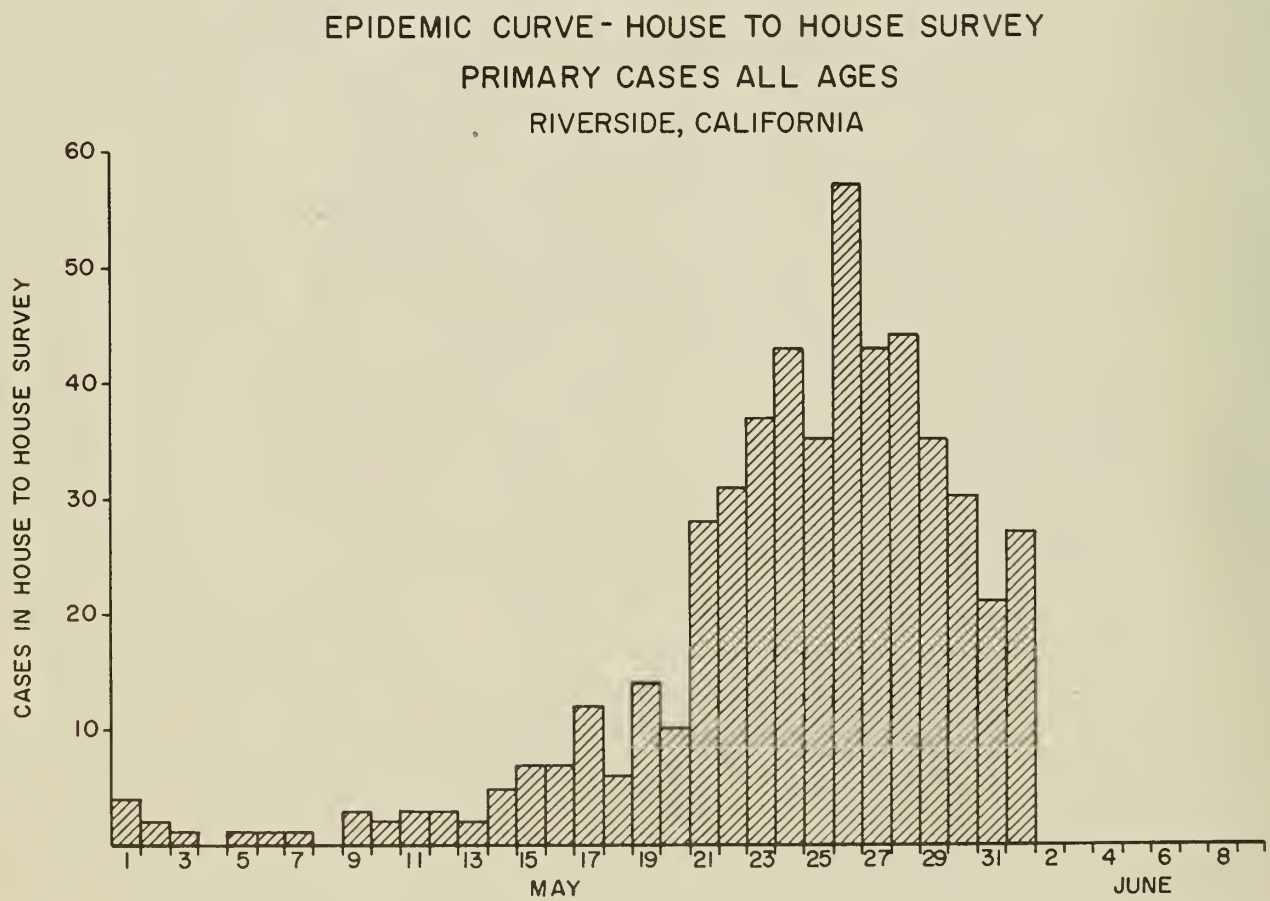
Age specific attack rates were remarkably uniform, although somewhat higher among infants and young children.

An intensive telephone survey of 47 early cases, none of whom had had prior contact with any known cases of gastroenteritis, was conducted to determine a possible common source. These cases were selected from all age groups and from all parts of the city. Most of them were culturally confirmed by the isolation of *S. typhimurium*. No food item, store, or public event in common could be identified within this group. Such widely used items as milk and eggs were eliminated by the diverse sources of these items and the significantly large number of the infants who had never consumed them. All but two of these cases regularly drank the city's unchlorinated tap water.

The community water supply consists of a series of deep wells both inside and outside the city. Because of the purity of this water, it had never been chlorinated. Regular monitoring of the water supply by standard coliform counting techniques, even during the outbreak, had never revealed coliform organisms in excess of acceptable numbers. Nonetheless, water samples obtained on May 31 and June 2 from five locations in the city were shown to contain *S. typhimurium*. The geographic distribution of cases corresponds with that of the city water supply.

The water supply was chlorinated on June 2. An intensive investigation is underway to determine the source of contamination. Measures are also being taken to minimize secondary spread within the community.

(Reported by Dr. Philip Condit, Director, Division of Communicable Diseases, California State Department of Public Health, and Dr. Everett Stone, Director, Riverside County Health Department, Riverside, California and a team from the Communicable Disease Center.)



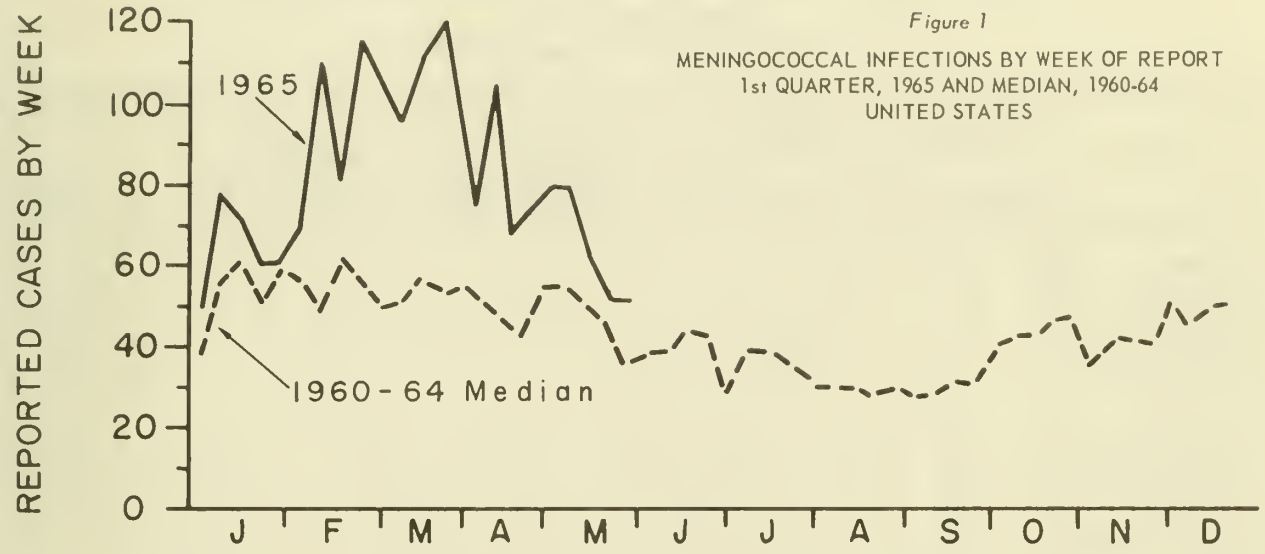


Figure 1

MENINGOCOCCAL INFECTIONS BY WEEK OF REPORT
1st QUARTER, 1965 AND MEDIAN, 1960-64
UNITED STATES

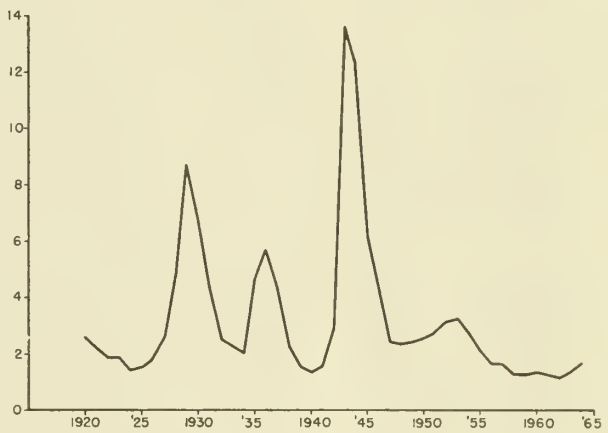
MENINGOCOCCAL INFECTIONS

The weekly number of reported meningococcal infections has decreased markedly during April and May, and is now approaching the weekly median level for the years 1960-1964 (Figure 1). A total of 1,768 cases have been reported through the 22nd week of 1965, as compared to 1,400 cases during the comparable period of 1964, an increase of 26.3 percent. The observed decrease during the preceding 8 weeks reflects the normal seasonal fluctuation in disease incidence and cannot be interpreted as indicating the end of the current cyclic increase.

The annual rates for meningococcal infections in the United States for the years 1920 to 1964 are shown in figure 2. Although the case rate for 1964 was quite low, 1.6 per 100,000, it represented an increase of 23 percent over the preceding year. Cyclic increases have occurred at intervals of 8 to 12 years, with a duration of 4 to 6 years. Accordingly, it may be anticipated that this disease will continue to show increased activity in the United States during the next year or two and possibly longer.

Figure 2

MENINGOCOCCAL INFECTIONS ANNUAL RATE PER 100,000
UNITED STATES, 1920-64



CLOSTRIDIUM PERFRINGENS FOOD POISONING
Georgia

An outbreak of *Clostridium perfringens* food poisoning occurred among students and teachers following lunch in a high school cafeteria on May 5, 1965. Of the 447 who ate the suspected meal, 256 were affected for an attack rate of more than 57 percent.

The illness was characterized by diarrhea, abdominal cramps, nausea, but seldom vomiting, and a median incubation period of 14½ hours. Symptoms were generally mild, although causing considerable discomfort and some disruption of normal activity for 12 to 24 hours.

Of the foods served, roast beef was incriminated. Laboratory work confirmed these findings. On bacteriological examination a sample of leftover roast beef yielded a viable count of 80,000 *C. perfringens* per gram and numbers seen on direct microscopic smear suggested that the count had previously been much higher. Other known food poisoning organisms were not found in the roast beef.

The raw beef was received frozen from government surplus stock, thawed for 2 or 3 days in the walk-in

(Continued on back page)

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
JUNE 5, 1965 AND MAY 30, 1964 (22nd WEEK)

Area	Aseptic Meningitis		Encephalitis		Poliomyelitis						Diphtheria	
			Primary	Post-Inf.	Total Cases			Paralytic				
						Cumulative			Cumulative			Cum.
	1965	1964	1965	1965	1965	1965	1964	1965	1965	1964	1965	1965
UNITED STATES...	27	42	22	18	2	13	32	2	10	26	1	76
NEW ENGLAND.....	-	-	2	-	-	-	1	-	-	1	-	1
Maine.....	-	-	-	-	-	-	1	-	-	1	-	-
New Hampshire.....	-	-	-	-	-	-	-	-	-	-	-	-
Vermont.....	-	-	-	-	-	-	-	-	-	-	-	-
Massachusetts.....	-	-	1	-	-	-	-	-	-	-	-	1
Rhode Island.....	-	-	1	-	-	-	-	-	-	-	-	-
Connecticut.....	-	-	-	-	-	-	-	-	-	-	-	-
MIDDLE ATLANTIC.....	6	5	7	5	-	1	5	-	-	5	-	4
New York City.....	2	2	3	-	-	1	1	-	-	1	-	2
New York, Up-State.	3	2	1	-	-	-	2	-	-	2	-	-
New Jersey.....	-	1	2	-	-	-	2	-	-	2	-	-
Pennsylvania.....	1	-	1	5	-	-	-	-	-	-	-	2
EAST NORTH CENTRAL...	3	3	2	1	-	-	3	-	-	3	-	3
Ohio.....	1	-	-	-	-	-	2	-	-	2	-	1
Indiana.....	-	-	-	-	-	-	-	-	-	-	-	2
Illinois.....	1	1	-	1	-	-	1	-	-	1	-	-
Michigan.....	1	2	2	-	-	-	-	-	-	-	-	-
Wisconsin.....	-	-	-	-	-	-	-	-	-	-	-	-
WEST NORTH CENTRAL...	-	1	-	1	1	4	1	1	4	-	-	18
Minnesota.....	-	1	-	1	-	1	-	-	1	-	-	7
Iowa.....	-	-	-	-	-	-	-	-	-	-	-	1
Missouri.....	-	-	-	-	-	-	1	-	-	-	-	1
North Dakota.....	-	-	-	-	-	-	-	-	-	-	-	-
South Dakota.....	-	-	-	-	-	-	-	-	-	-	-	7
Nebraska.....	-	-	-	-	1	3	-	1	3	-	-	1
Kansas.....	-	-	-	-	-	-	-	-	-	-	-	1
SOUTH ATLANTIC.....	5	4	7	3	-	-	12	-	-	9	-	15
Delaware.....	1	-	-	-	-	-	-	-	-	-	-	-
Maryland.....	-	-	-	-	-	-	1	-	-	1	-	-
Dist. of Columbia..	-	-	-	-	-	-	-	-	-	-	-	3
Virginia.....	-	2	1	-	-	-	-	-	-	-	-	-
West Virginia.....	-	-	1	-	-	-	1	-	-	1	-	-
North Carolina.....	3	-	-	-	-	-	5	-	-	2	-	1
South Carolina.....	-	1	-	-	-	-	-	-	-	-	-	-
Georgia.....	-	-	-	-	-	-	1	-	-	1	-	8
Florida.....	1	1	5	3	-	-	4	-	-	4	-	3
EAST SOUTH CENTRAL...	3	10	-	-	-	-	3	-	-	2	1	11
Kentucky.....	2	6	-	-	-	-	-	-	-	-	-	-
Tennessee.....	-	3	-	-	-	-	1	-	-	-	-	-
Alabama.....	1	-	-	-	-	-	2	-	-	2	1	10
Mississippi.....	-	1	-	-	-	-	-	-	-	-	-	1
WEST SOUTH CENTRAL...	3	-	1	3	-	3	2	-	3	2	-	19
Arkansas.....	-	-	-	-	-	-	-	-	-	-	-	2
Louisiana.....	-	-	-	-	-	-	-	-	-	-	-	2
Oklahoma.....	-	-	-	-	-	-	1	-	-	1	-	-
Texas.....	3	-	1	3	-	3	1	-	3	1	-	15
MOUNTAIN.....	-	2	-	1	-	3	3	-	1	2	-	-
Montana.....	-	-	-	-	-	-	-	-	-	-	-	-
Idaho.....	-	-	-	-	-	-	-	-	-	-	-	-
Wyoming.....	-	-	-	-	-	-	1	-	-	1	-	-
Colorado.....	-	1	-	-	-	-	1	-	-	1	-	-
New Mexico.....	-	-	-	-	-	1	1	-	1	-	-	-
Arizona.....	-	1	-	-	-	2	-	-	-	-	-	-
Utah.....	-	-	-	1	-	-	-	-	-	-	-	-
Nevada.....	-	-	-	-	-	-	-	-	-	-	-	-
PACIFIC.....	7	17	3	4	1	2	2	1	2	2	-	5
Washington.....	-	4	-	-	1	1	-	1	1	-	-	-
Oregon.....	-	-	-	-	-	-	1	-	-	1	-	1
California.....	5	12	3	4	-	1	1	-	1	1	-	4
Alaska.....	-	-	-	-	-	-	-	-	-	-	-	-
Hawaii.....	2	1	-	-	-	-	-	-	-	-	-	-
Puerto Rico	-	-	-	-	-	-	-	-	-	-	-	6

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES

FOR WEEKS ENDED

JUNE 5, 1965 AND MAY 30, 1964 (22nd WEEK) - Continued

Area	Brucellosis	Infectious Hepatitis including Serum Hepatitis					Meningococcal Infections			Tetanus	
		Total incl. unk.	Under 20 years	20 years and over	Cumulative Totals			Cumulative			Cum.
	1965	1965	1965	1965	1965	1964	1965	1965	1964	1965	1965
UNITED STATES...	1	463	200	237	16,000	19,005	51	1,768	1,400	2	89
NEW ENGLAND.....	-	27	8	18	967	1,957	3	90	37	1	5
Maine.....	-	4	1	3	195	670	-	9	5	-	-
New Hampshire.....	-	3	2	1	90	140	-	5	-	-	1
Vermont.....	-	-	-	-	42	248	-	2	1	-	-
Massachusetts.....	-	8	2	6	368	386	1	30	16	-	3
Rhode Island.....	-	4	1	3	125	105	-	13	2	-	-
Connecticut.....	-	8	2	5	147	408	2	31	13	1	1
MIDDLE ATLANTIC.....	-	74	25	49	2,776	4,316	6	239	159	1	5
New York City.....	-	23	5	18	513	618	4	42	21	-	-
New York, Up-State.	-	28	8	20	1,155	1,927	-	60	45	-	2
New Jersey.....	-	14	7	7	495	794	1	69	52	-	-
Pennsylvania.....	-	9	5	4	613	977	1	68	41	1	3
EAST NORTH CENTRAL...	-	66	38	24	3,074	2,909	9	222	195	-	8
Ohio.....	-	13	9	4	901	757	2	61	55	-	1
Indiana.....	-	17	10	5	259	249	2	31	32	-	4
Illinois.....	-	7	2	5	584	504	1	58	44	-	1
Michigan.....	-	23	14	9	1,132	1,188	4	45	46	-	-
Wisconsin.....	-	6	3	1	198	211	-	27	18	-	2
WEST NORTH CENTRAL...	1	33	14	19	1,066	1,067	1	93	77	-	3
Minnesota.....	-	3	2	1	96	94	-	19	14	-	2
Iowa.....	-	13	7	6	413	161	-	5	3	-	-
Missouri.....	-	7	2	5	208	260	-	44	42	-	1
North Dakota.....	-	-	-	-	14	42	-	4	8	-	-
South Dakota.....	1	-	-	-	16	104	-	2	-	-	-
Nebraska.....	-	-	-	-	32	24	-	9	5	-	-
Kansas.....	-	10	3	7	287	382	1	10	5	-	-
SOUTH ATLANTIC.....	-	54	25	23	1,637	1,816	7	348	305	-	25
Delaware.....	-	-	-	-	57	40	-	4	4	-	-
Maryland.....	-	9	7	2	312	348	-	32	21	-	1
Dist. of Columbia..	-	1	1	-	20	30	-	4	10	-	-
Virginia.....	-	10	2	5	403	268	3	41	33	-	4
West Virginia.....	-	7	3	4	248	304	-	23	20	-	1
North Carolina.....	-	5	3	2	134	331	1	64	48	-	2
South Carolina.....	-	2	2	-	60	65	1	51	46	-	2
Georgia.....	-	1	1	-	58	41	-	45	42	-	3
Florida.....	-	19	6	10	345	389	2	84	81	-	12
EAST SOUTH CENTRAL...	-	27	18	9	1,195	1,318	4	135	127	-	14
Kentucky.....	-	7	5	2	414	563	-	58	44	-	2
Tennessee.....	-	5	4	1	432	457	3	43	43	-	5
Alabama.....	-	11	9	2	192	186	1	23	23	-	6
Mississippi.....	-	4	-	4	157	112	-	11	17	-	1
WEST SOUTH CENTRAL...	-	53	23	28	1,371	1,376	8	255	179	-	16
Arkansas.....	-	7	2	5	193	153	-	13	13	-	4
Louisiana.....	-	9	6	3	231	300	4	139	87	-	2
Oklahoma.....	-	-	-	-	34	77	-	17	4	-	-
Texas.....	-	37	15	20	913	846	4	86	75	-	10
MOUNTAIN.....	-	23	6	5	963	1,202	-	58	48	-	2
Montana.....	-	1	1	-	70	112	-	1	-	-	-
Idaho.....	-	1	-	-	152	127	-	7	1	-	-
Wyoming.....	-	1	-	1	31	38	-	3	3	-	-
Colorado.....	-	4	3	1	195	331	-	13	10	-	1
New Mexico.....	-	2	-	2	186	175	-	10	20	-	-
Arizona.....	-	11	-	-	190	272	-	16	3	-	1
Utah.....	-	3	2	1	134	110	-	6	4	-	-
Nevada.....	-	-	-	-	5	37	-	2	7	-	-
PACIFIC.....	-	106	43	62	2,951	3,044	13	328	273	-	11
Washington.....	-	13	3	10	249	334	1	25	21	-	-
Oregon.....	-	11	3	7	243	343	2	25	17	-	2
California.....	-	80	36	44	2,300	2,219	9	261	222	-	9
Alaska.....	-	2	1	1	141	90	1	10	6	-	-
Hawaii.....	-	-	-	-	18	58	-	7	7	-	-
Puerto Rico	-	34	27	7	552	414	-	3	26	-	17

Table 3. CASES OF SPECIFIED NOTIFIABLE DISEASES: UNITED STATES
FOR WEEKS ENDED
JUNE 5, 1965 AND MAY 30, 1964 (22nd WEEK) - Continued

Area	Measles			Strept. Sore Th. & Scarlet Fev.	Tularemia		Typhoid Fever		Rabies in Animals	
		Cumulative				Cum.		Cum.		Cum.
	1965	1965	1964	1965	1965	1965	1965	1965	1965	1965
UNITED STATES...	7,304	206,331	393,453	5,718	3	86	13	153	93	2,185
NEW ENGLAND.....	622	34,528	12,384	641	-	-	-	1	3	26
Maine.....	84	2,497	2,059	53	-	-	-	-	2	3
New Hampshire.....	13	369	189	-	-	-	-	-	-	-
Vermont.....	58	891	1,969	-	-	-	-	-	1	21
Massachusetts.....	215	18,500	3,529	123	-	-	-	1	-	1
Rhode Island.....	80	3,727	1,341	84	-	-	-	-	-	-
Connecticut.....	172	8,544	3,297	381	-	-	-	-	-	1
MIDDLE ATLANTIC.....	785	10,770	44,406	317	-	-	2	27	5	83
New York City.....	128	1,297	13,273	9	-	-	1	14	-	-
New York, Up-State.	203	2,952	9,935	157	-	-	-	6	4	76
New Jersey.....	83	1,790	10,494	52	-	-	-	2	-	-
Pennsylvania.....	371	4,731	10,704	99	-	-	1	5	1	7
EAST NORTH CENTRAL...	2,254	43,783	85,822	839	-	8	2	21	23	316
Ohio.....	240	7,857	17,038	102	-	-	-	6	18	165
Indiana.....	152	1,482	19,648	173	-	2	2	6	2	24
Illinois.....	147	1,982	14,514	139	-	5	-	4	2	60
Michigan.....	691	22,075	22,725	286	-	-	-	3	1	28
Wisconsin.....	1,024	10,387	11,897	139	-	1	-	2	-	39
WEST NORTH CENTRAL...	251	15,022	26,632	236	-	8	-	3	26	416
Minnesota.....	40	568	246	10	-	-	-	-	2	85
Iowa.....	57	8,181	20,890	53	-	-	-	-	7	126
Missouri.....	40	2,372	815	25	-	5	-	3	9	57
North Dakota.....	59	3,352	3,886	98	-	-	-	-	1	18
South Dakota.....	26	102	3	13	-	1	-	-	3	31
Nebraska.....	29	447	792	-	-	-	-	-	1	24
Kansas.....	NN	NN	NN	37	-	2	-	-	3	75
SOUTH ATLANTIC.....	629	21,492	33,963	634	-	24	3	35	10	302
Delaware.....	15	459	328	35	-	-	-	3	-	-
Maryland.....	17	898	3,169	19	-	-	1	10	1	3
Dist. of Columbia..	1	52	342	2	-	-	-	-	-	-
Virginia.....	173	3,359	11,268	168	-	3	-	3	8	233
West Virginia.....	289	12,082	7,477	227	-	-	-	1	-	9
North Carolina.....	12	267	1,029	6	-	4	2	10	-	2
South Carolina.....	38	937	3,965	37	-	3	-	4	-	1
Georgia.....	1	584	152	11	-	14	-	2	1	26
Florida.....	83	2,854	6,233	129	-	-	-	2	-	28
EAST SOUTH CENTRAL...	254	12,248	60,197	682	-	14	-	15	9	555
Kentucky.....	74	2,229	17,230	112	-	3	-	6	3	47
Tennessee.....	114	6,966	20,468	476	-	10	-	3	6	498
Alabama.....	35	2,051	15,988	29	-	1	-	3	-	7
Mississippi.....	31	1,002	6,511	65	-	-	-	3	-	3
WEST SOUTH CENTRAL...	860	28,159	64,040	686	3	23	2	20	14	354
Arkansas.....	6	1,053	1,011	1	2	12	-	8	1	49
Louisiana.....	3	73	75	-	-	1	-	2	1	58
Oklahoma.....	10	166	861	27	-	5	-	2	3	67
Texas.....	841	26,867	62,093	658	1	5	2	8	9	180
MOUNTAIN.....	724	16,495	14,679	938	-	9	-	13	2	37
Montana.....	57	3,227	2,345	22	-	1	-	-	-	3
Idaho.....	112	2,226	1,493	97	-	-	-	-	-	-
Wyoming.....	10	794	207	6	-	1	-	1	-	-
Colorado.....	264	4,609	2,529	319	-	-	-	-	-	1
New Mexico.....	19	544	263	258	-	-	-	8	-	6
Arizona.....	61	907	5,609	114	-	-	-	4	2	26
Utah.....	190	4,001	1,314	122	-	7	-	-	-	1
Nevada.....	11	187	919	-	-	-	-	-	-	-
PACIFIC.....	925	23,834	51,330	745	-	-	4	18	1	96
Washington.....	266	6,843	18,248	175	-	-	1	2	-	-
Oregon.....	77	2,882	6,146	10	-	-	1	4	-	2
California.....	386	11,104	25,627	513	-	-	2	11	1	93
Alaska.....	3	125	1,005	26	-	-	-	-	-	1
Hawaii.....	193	2,880	304	21	-	-	-	1	-	-
Puerto Rico	60	1,657	4,298	1	-	-	-	3	-	10

Week No. 22

Table 4. DEATHS IN 122 UNITED STATES CITIES FOR WEEK ENDED JUNE 5, 1965

(By place of occurrence and week of filing certificate. Excludes fetal deaths)

Area	All Causes		Pneumonia and Influenza All Ages	Under 1 year All Causes
	All Ages	65 years and over		
NEW ENGLAND:	707	423	31	36
Boston, Mass.	246	133	11	10
Bridgeport, Conn.	47	22	-	4
Cambridge, Mass.	21	14	1	-
Fall River, Mass.	20	14	-	2
Hartford, Conn.	69	41	3	6
Lowell, Mass.	17	10	2	1
Lynn, Mass.	22	15	2	1
New Bedford, Mass.	29	21	-	-
New Haven, Conn.	49	26	1	3
Providence, R. I.	56	36	5	5
Somerville, Mass.	16	12	1	1
Springfield, Mass.	34	22	1	1
Waterbury, Conn.	22	16	1	-
Worcester, Mass.	59	41	3	2
MIDDLE ATLANTIC:	3,163	1,836	101	154
Albany, N. Y.	49	24	2	3
Allentown, Pa.	41	27	3	4
Buffalo, N. Y.	139	92	8	6
Camden, N. J.	33	12	1	4
Elizabeth, N. J.	37	21	4	1
Erie, Pa.	34	24	3	1
Jersey City, N. J.	65	37	1	5
Newark, N. J.	95	38	2	5
New York City, N. Y.	1,607	930	35	67
Paterson, N. J.	43	24	5	2
Philadelphia, Pa.	472	274	9	23
Pittsburgh, Pa.	174	96	4	13
Reading, Pa.	41	27	1	3
Rochester, N. Y.	88	53	10	7
Schenectady, N. Y.	21	13	-	1
Scranton, Pa.	38	23	-	-
Syracuse, N. Y.	57	38	1	2
Trenton, N. J.	61	33	2	5
Utica, N. Y.	31	25	7	-
Yonkers, N. Y.	37	25	3	2
EAST NORTH CENTRAL:	2,377	1,330	74	133
Akron, Ohio*	55	31	1	3
Canton, Ohio	30	19	4	2
Chicago, Ill.	746	399	27	43
Cincinnati, Ohio	137	81	3	13
Cleveland, Ohio	193	116	1	4
Columbus, Ohio	120	73	4	9
Dayton, Ohio	61	24	-	9
Detroit, Mich.	351	188	11	17
Evansville, Ind.	37	19	3	2
Flint, Mich.	42	17	3	3
Fort Wayne, Ind.	38	23	1	2
Gary, Ind.	11	6	-	-
Grand Rapids, Mich.	55	39	3	4
Indianapolis, Ind.	113	58	2	9
Madison, Wis.	26	11	-	2
Milwaukee, Wis.	133	83	3	4
Peoria, Ill.	23	18	-	3
Rockford, Ill.*	26	16	2	2
South Bend, Ind.	36	24	4	-
Toledo, Ohio	93	51	2	2
Youngstown, Ohio	51	34	-	-
WEST NORTH CENTRAL:	729	438	20	46
Des Moines, Iowa	44	30	1	2
Duluth, Minn.	24	16	-	2
Kansas City, Kans.	36	21	1	5
Kansas City, Mo.	105	65	2	6
Lincoln, Nebr.	25	16	3	1
Minneapolis, Minn.	106	67	1	5
Omaha, Nebr.	85	50	2	2
St. Louis, Mo.	212	114	3	15
St. Paul, Minn.	52	33	4	5
Wichita, Kans.	40	26	3	3
SOUTH ATLANTIC:	1,029	512	49	67
Atlanta, Ga.	100	45	7	4
Baltimore, Md.	211	103	7	12
Charlotte, N. C.	45	15	1	7
Jacksonville, Fla.	68	33	1	9
Miami, Fla.	80	43	2	4
Norfolk, Va.	54	24	6	5
Richmond, Va.	90	47	2	4
Savannah, Ga.	24	7	3	1
St. Petersburg, Fla.	74	61	1	-
Tampa, Fla.	76	41	15	5
Washington, D. C.	168	72	2	16
Wilmington, Del.	39	21	2	-
EAST SOUTH CENTRAL:	504	256	25	36
Birmingham, Ala.	65	38	-	4
Chattanooga, Tenn.	47	21	-	2
Knoxville, Tenn.	22	13	-	3
Louisville, Ky.	94	48	10	8
Memphis, Tenn.	128	61	3	10
Mobile, Ala.	37	17	2	3
Montgomery, Ala.	23	16	1	-
Nashville, Tenn.	88	42	9	6
WEST SOUTH CENTRAL:	1,016	501	24	88
Austin, Tex.	43	19	3	6
Baton Rouge, La.	18	8	1	-
Corpus Christi, Tex.	20	11	-	2
Dallas, Tex.	131	67	3	11
El Paso, Tex.	42	20	2	5
Fort Worth, Tex.	62	27	1	6
Houston, Tex.	180	90	3	10
Little Rock, Ark.	54	26	2	3
New Orleans, La.	172	94	-	13
Oklahoma City, Okla.	75	34	-	10
San Antonio, Tex.	124	58	4	10
Shreveport, La.	47	19	3	7
Tulsa, Okla.	48	28	2	5
MOUNTAIN:	324	176	15	19
Albuquerque, N. Mex.	22	12	2	1
Colorado Springs, Colo.	15	10	1	-
Denver, Colo.	101	52	3	9
Ogden, Utah	21	13	1	2
Phoenix, Ariz.	63	33	4	3
Pueblo, Colo.	20	7	1	2
Salt Lake City, Utah	42	25	1	2
Tucson, Ariz.	40	24	2	-
PACIFIC:	1,439	826	41	80
Berkeley, Calif.	23	15	-	-
Fresno, Calif.	46	24	1	1
Glendale, Calif.	29	21	-	2
Honolulu, Hawaii	43	20	1	-
Long Beach, Calif.	66	42	3	6
Los Angeles, Calif.	422	232	17	28
Oakland, Calif.	136	75	3	2
Pasadena, Calif.	35	20	-	-
Portland, Oreg.	95	52	2	10
Sacramento, Calif.	70	44	-	2
San Diego, Calif.	70	43	2	5
San Francisco, Calif.	178	104	5	12
San Jose, Calif.*	35	21	3	2
Seattle, Wash.	116	65	2	8
Spokane, Wash.	34	21	-	-
Tacoma, Wash.	41	27	2	2
Total	11,288	6,298	380	659

*Estimate - based on average percent of divisional total.

Cumulative Totals
including reported corrections for previous weeks

All Causes, All Ages	284,098
All Causes, Age 65 and over	161,838
Pneumonia and Influenza, All Ages	12,898
All Causes, Under 1 Year of Age	16,579

CLOSTRIDIUM PERFRINGENS FOOD POISONING

(Continued from page 187)

cooler, and cooked on May 4, the day prior to serving. After cooking, the beef was allowed to cool at room temperature for about 1½ hours and then refrigerated overnight. The next morning, the day of serving, it was removed from refrigeration and transported some 2 miles to a local grocery store for machine slicing. After approximately 2 hours had lapsed, the meat was returned to refrigeration where it remained until served cold for lunch.

In addition to being eaten at the noon meal, a portion of the roast beef was retained in the walk-in refrigerator and served to coaches and students from several neighboring schools who participated in a regional track meet that night. Information regarding illness has been more difficult to obtain from this group and is less complete than that from the group who ate the meat for lunch. However, at least 14 persons from visiting schools are known to have experienced typical *C. perfringens* food poisoning.

(Reported by Dr. John E. McCroan, Chief Epidemiologist, and Mr. Byron W. Mixson, Assistant Epidemiologist, Georgia Department of Public Health.)

THE MORBIDITY AND MORTALITY WEEKLY REPORT, WITH A CIRCULATION OF 13,000 IS PUBLISHED BY THE COMMUNICABLE DISEASE CENTER, ATLANTA, GEORGIA 30333.

IN ADDITION TO THE ESTABLISHED PROCEDURES FOR REPORTING MORBIDITY AND MORTALITY, THE COMMUNICABLE DISEASE CENTER WELCOMES ACCOUNTS OF INTERESTING OUTBREAKS OR CASES. SUCH ACCOUNTS SHOULD BE ADDRESSED TO:

THE EDITOR
MORBIDITY AND MORTALITY WEEKLY REPORT
COMMUNICABLE DISEASE CENTER
ATLANTA, GEORGIA 30333

NOTE: THESE PROVISIONAL DATA ARE BASED ON WEEKLY TELEGRAMS TO THE CDC BY THE INDIVIDUAL STATE HEALTH DEPARTMENTS. THE REPORTING WEEK CONCLUDES ON SATURDAY; COMPILED DATA ON A NATIONAL BASIS ARE RELEASED ON THE SUCCEEDING FRIDAY.

SYMBOLS:---DATA NOT AVAILABLE
- QUANTITY ZERO

THE CONSTRUCTION OF THE MORTALITY CURVES IS DESCRIBED IN VOL. 14, NO. 1.